WHAT IS CLAIMED IS:

1.   A communication system comprising:

at least two communication networks over which communications between physical devices connected to said communication networks are to be carried, said communication networks implementing different protocols for messaging; and

a communication server acting between said communication networks and through which messages transmitted between said communication networks pass, said communication server including a knowledge base storing protocol conversion information, said communication server accessing said protocol conversion information in said knowledge base upon receipt of a message and converting the protocol thereof to a protocol compatible with the communication network to which said message is being sent.

2.   A communication system as defined in claim 1 wherein said communication server includes virtual devices communicating with said communication networks and a virtual gateway bridging said virtual networks, said virtual gateway accessing said knowledge base and converting protocols of said messages.

3.   A communication system as defined in claim 2 wherein said virtual gateway includes a preprocessor, a processor and a postprocessor, said preprocessor examining each incoming message to locate target logical connection information determining the target destination for said incoming message, said processor converting the protocol of each incoming message, where appropriate, based on said target logical connection information, said postprocessor wrapping each message received from said processor with headers, where appropriate.

4.   A communication system as defined in any of the preceding claims *Claim 1* wherein one of said communication networks is a wireless network and wherein one of said communication networks is a wired land-line network.

5.   A communication system as defined in claim 4 wherein messages transmitted over said wireless network, include API messages to be processed by destination physical devices and target logical connection information specifying the

5   destinations for said API messages.

6.   A communication system as defined in claim 5 wherein said target logical connection information is including in a logical message header wrapping said API message.

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7.   A communication system as defined in claim 6 wherein said preprocessor strips the logical message header from said API message upon receipt of a message from said wireless network and uses said logical message header as a key to search said knowledge base for said protocol conversion information.

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8.   A communication system as defined in claim 7 wherein said preprocessor analyzes the API message of a message received from said wireless network for said target logical connection information if said target logical connection information cannot be determined from said logical message header.

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9.   A communication system as defined in ~~any one of claims 4 to 8~~ _Claim 4_ wherein messages transmitted over said land-line network are in the form of API messages, said preprocessor analyzing the API message of a message received from said land-line network for said target logical connection information.

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10.   A communication server to act as a gateway for the transmission of messages between two virtual devices communicating with networks implementing different protocols, said communication server comprising:

          a knowledge base storing protocol conversion information to convert

30   messages of one protocol to a different protocol; and

          a virtual gateway accessing said protocol conversion information upon receipt of a message to be transmitted between said virtual devices and converting the

protocol of said message to a protocol compatible with the network to which said message is being sent.

11.   A communication server as defined in claim 10 wherein said virtual
5   gateway includes a preprocessor, a processor and a postprocessor, said preprocessor examining each incoming message to locate target logical connection information determining the target destination for said incoming message, said processor converting the protocol of each incoming message, where appropriate, based on said target logical connection information, said postprocessor wrapping each message
10   received from said processor with headers, where appropriate.

12.   A communication server as defined in claim 11 further including a tool kit to setup said knowledge base with said protocol conversion information.

15   13.   A communication server as defined in claim 12 wherein said virtual gateway updates said protocol conversion information based on message traffic therethrough.

14.   A communication server as defined in claim 11 wherein said
20   preprocessor unwraps headers accompanying each incoming message and uses said headers as keys to search said knowledge base for said protocol conversion information.

15.   A communication server as defined in claim 14 wherein said
25   preprocessor analyzes the message for said target logical connection information if said target logical connection information cannot be determined from said headers.

16.   A communication system comprising:
          a wireless network;
30   at least one wireless terminal to transmit messages over said wireless
     network;
          a land-line network;

-23-

at least one host computer connected to said land-line network to transmit messages over said land-line network; and

a communication server providing communications connectivity for messages to be transmitted from one network to the other, wherein said at least one

5   wireless terminal and said communication server include registries, said registries including mapping information to map physically said at least one wireless terminal to said land-line network to enable messages transmitted by said at least one wireless terminal to be delivered to said at least one host computer.

10   17.   A communication system as defined in claim 16 wherein the registry in said at least one wireless terminal maps drivers and port of said wireless terminal to ports of said communication server.

18.   A communication system as defined in claim 17 wherein the registry in

15   said communication server maps logical connections between said wireless and land-line networks.

19.   A communication system as defined in ~~any one of claims 16 to 18~~ Claim 16 wherein said communication server includes a knowledge base storing protocol

20   conversion information, said communication server accessing said protocol conversion information in said knowledge base upon receipt of a message and converting the protocol thereof to a protocol compatible with the network to which said message is being sent.